Ultrasonically Assisted Extraction in Food Processing and the Challenges of Integrating Ultrasound into the Food Industry

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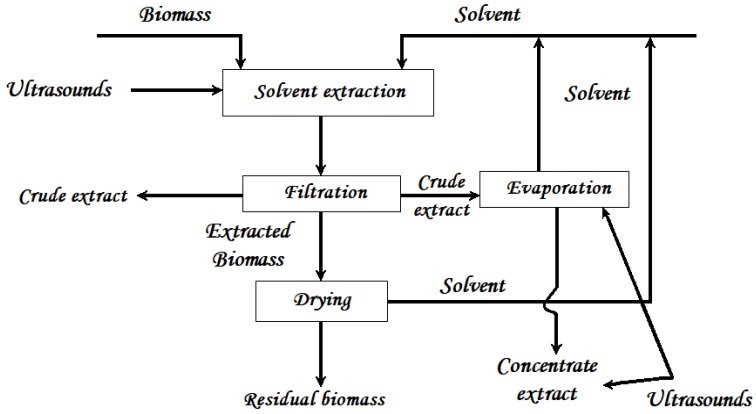
This presentation is based upon a chapter[2] which we contributed to a recent book: ***Ultrasound in Food Processing***[1]. Starting with basic principles of ultrasound, the presentation will introduce the audience to the world of acoustic and its applications. Some of the book chapters (the whole book has 19 chapters) will be briefly presented, just to give to the audience a flavor of how ultrasound could help the food industry.
The main part of the lecture will be focused on Ultrasonically Assisted Extraction (UAE) in Food Processing and the Challenges of integrating Ultrasound in the Food Industry. Several examples and rules of how UAE should be correctly performed will complete the lecture. A unit operation scheme together with the place within it where the ultrasound could be used, completed with a proposed technology steps will be presented. The use of ultrasound in food processing is an emerging technology.



UAE Processing steps and potential unit operation scheme[3,4]

Ultrasonically Assisted Extraction Technology Steps

State of art in the field; Process description; Unit operation scheme; Mass balances; Energy balances; Process quality control points with Interphase and Computerized process control; Analytical procedures; Environmental issues; Safety issues; Personnel and qualification; Packaging and delivery procedures

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